CLAIMS

1. A method of determining the latent viral load in a host infected with HIV comprising,

treating resting lymphoid mononuclear cells obtained from the host with an effective amount of an agent capable of activating an HIV virus integrated into the genome of the cells; and

detecting the expression of cell-surface gp120 after the cells have been treated with the agent, wherein the presence or amount of cells expressing cell-surface gp120 is a measure of latent viral load.

2. A method of claims 1, further comprising obtaining the resting lymphoid mononuclear cells by the steps of:

a) obtaining a sample cell population;

b) depleting the sample cell population of cells expressing cell-surface gp120; and

c) depleting sample cell population of cells expressing HLA-DR.

3. A method of claim 2, wherein the sample cells are depleted of gp120 expressing cells by the steps of:

a) contacting sample cells with gp120-specific antibodies, each conjugated to a capture moiety, under conditions effective for the antibodies to attach to gp120 on the surface of cells, thereby forming labeled-cells;

b) contacting the labeled-cells with capture moiety-specific antibody under conditions effective for the capture moiety-specific antibody to attach to the labeled-cells, thereby forming a complex-labeled cells; and

c) removing the complex-labeled cells, , thereby depleting sample cells of gp120+ cells.

4. A method of claim 3, wherein the capture moiety –specific antibody is conjugated to magnetic particles.

5. A method of claim 3, wherein the capture moiety is FITC and the capture moiety-specific antibody is FITC-specific antibody conjugated to a magnetic ~~bead~~ particle.

6. A method of claims 4, wherein the magnetic particles are 10-100 nm in diameter.

7. A method of claims 5, wherein the magnetic particles are 10-100 nm in diameter

8. A method of claims 3, wherein the removing is accomplished by a magnetic field acting on the magnetic particles.

9. A method of claim 2, further comprising:
separating CD4+ cells from the sample.

10. A method of claim 2, further comprising:
separating CD8+ cells from the sample.

11. A method of claim 2, wherein the depleting sample cell population of cells expressing HLA-DR is accomplished by flow cytometry cell sorting and said cells are labeled with a fluorochrome-labeled antibody specific-for HLA-DR.

12. A method of claim 1, wherein the tissue is lymphoid.

13. A method of claims 1, wherein the agent is phorbol ester or a cytokine.

14. A method of claim 1, wherein the measure of latent viral load is number of cells expressing gp120 after treating the resting with an effective amount of an agent capable of activating an HIV virus integrated into the genome of the cells.

15. A method of claim 1, wherein the measure of latent viral load is compared to an established cell line harboring latent HIV-1.

16. A method of claim 15, wherein the cell line is OM-10.1, U1, or Jurkat cells.

17. A method of treating a viral infection comprising

measuring the latent viral load in an HIV-infected patient; and

determining whether to administer to the patient an agent capable of activating an HIV virus integrated into the genome of a cell by the value of the latent viral load.